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10/045,698	01/10/2002	Yoshifumi Tanimoto	81800.0177	9845

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EXAMINER
BURGESS, BARBARA N

ART UNIT	PAPER NUMBER
2157	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/045,698	TANIMOTO, YOSHIFUMI	
	Examiner	Art Unit	
	Barbara N. Burgess	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,8-20 and 25-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,8-20 and 25-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to Request for Continuation Examination (RCE) filed October 9, 2007. Claims 1-4 and 8-20 are presented for further examination. Claims 25-28 are presented for initial examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 8-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zakurdaev et al. (hereinafter "Zak", US Patent Publication 2002/0073182 A1) in view of Gong (US Patent Publication 2001/0044819) in further view of Beyda et al. (hereinafter "Beyda", US Patent 7,120,927 B1) and in further view of Fukasawa et al. (hereinafter "Fuka", US Patent Application Publication 2004/0210667 A1).

As per claims 1, 8, Zak discloses a relay server comprising:

- Communicating means and device for communicating with a plurality of network devices (paragraphs [0032-0033]);
- Connection information holding means and device for holding connection information (paragraphs [0044-0046]);

- Wherein the communicating means and device carries out communication with the network devices in accordance with the connection information, and relays data between the network devices in accordance with connection demand information generated from one of the plurality of network devices (paragraphs 0032-0033);
- Communicating with a plurality of network devices, including a first network device in a first LAN and second network device in a second LAN; (paragraphs [0032-0033])
- A first connection between the relay server and the first network device and a second connection between the relay server and the second network device (paragraph [0046]);
- Communication means carried between the first and second network devices busing the first and second connections, and relays between the first and second network devices in accordance with connection demand information generated from the first and second network devices (paragraphs [0032-0033]).

However, Zak does not explicitly disclose:

- TCP/IP connections that are established and held in response to login demands from the plurality of network devices.

However, in an analogous art, Gong teaches a relay server having connection between the remote server, which is the web server and client having web browser and applet software for Internet access (paragraphs [0010-0011, 0016]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement Gongs relay server in Zak's system in order to that the java applets receive the necessary downloads from remote servers.

Zak, in view of Gong, does not explicitly disclose:

- Wherein the first network device initiates, logs into and establishes the first held TCP/IP connection with the relay server, and the second network device initiates, logs into and establishes the second held TCP/IP connection with the relay server.

However, in an analogous art, Beyda teaches a first and second user registering with the relay server before attempting to send emails(column 5, lines 33-60).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement Beyda's first network device initiates, logs into and establishes the first held TCP/IP connection with the relay server, and the second network device initiates, logs into and establishes the second held TCP/IP connection with the relay server in Zak's method in order to send and receive emails.

Zak, in view of Gong and Beyda, does not explicitly disclose:

- Wherein the connection information holding means periodically receives via the first or second held TCP/IP connection a connection holding command from the first or second network device, and a response is communicated to the first or

second network device that sent the connection holding command to maintain the first or second held TCP/IP connection.

However, in an analogous art, Fuka teaches maintaining a correspondence between video client and video server even though a disconnect has occurred. This is done by a request from the video client. In response, the video server transmits video data (paragraphs [0080]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Fuka's connection holding means in Zak's server enabling a session to continue despite disconnectivity.

As per claim 2, Zak discloses a communication system comprising:

- a plurality of network devices (paragraphs [0032-0033]);
- A relay server connected to the plurality of network devices via a network, wherein a first network device of the plurality of network devices establishes a communication path with the relay server, and generates a connection demand for communication with a second network device of the plurality of network devices to the relay sever when communicating with the second network device (paragraph [0046]);
- the relay server relays the communication between the first and Second network devices by using a communication path established in advance in accordance with the connection demand from the first network device (paragraphs [0032-0033]).

- Communicating with a plurality of network devices, including a first network device in a first LAN and second network device in a second LAN (paragraphs [0032-0033]);
- A first connection between the relay server and the first network device and a second connection between the relay server and the second network device (paragraph [0046]);
- Communication means carried between the first and second network devices busing the first and second connections, and relays between the first and second network devices in accordance with connection demand information generated from the first and second network devices (paragraphs [0032-0033]).

However, Zak does not explicitly disclose:

- TCP/IP connections.

However, in an analogous art, Gong teaches a relay server having connection between the remote server, which is the web server and client having web browser and applet software for Internet access (paragraphs [0010-0011, 0016]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement Gongs relay server in Zak's system in order to that the java applets receive the necessary downloads from remote servers.

Zak, in view of Gong, does not explicitly disclose:

- First and second devices initiates, logs into, and establishes TCP/IP connections with the relay server.

However, in an analogous art, Beyda teaches a first and second user registering with the relay server before attempting to send emails(column 5, lines 33-60).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement Beyda's first network device initiates, logs into and establishes the first held TCP/IP connection with the relay server, and the second network device initiates, logs into and establishes the second held TCP/IP connection with the relay server in Zak's method in order to send and receive emails.

Zak, in view of Gong and Beyda, does not explicitly disclose:

- Wherein the connection information holding means periodically receives via the first or second held TCP/IP connection a connection holding command from the first or second network device, and a response is communicated to the first or second network device that sent the connection holding command to maintain the first or second held TCP/IP connection.

However, in an analogous art, Fuka teaches maintaining a correspondence between video client and video server even though a disconnect has occurred. This is done by a request from the video client. In response, the video server transmits video data (paragraphs [0080]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Fuka's connection holding means in Zak's server enabling a session to continue despite disconnectivity.

As per claims 3, Zak discloses the communication system according to claim 2 wherein connection to the first network device from outside the LAN is limited (paragraphs [0032-0033]).

As per claim 4, Zak disclose the communication system according to claim 2 wherein the first network device is connected to the relay server via a gateway device having an address converting function (paragraph [0013]).

As per claim 9, Zak discloses the relay server according to claim 8, wherein a connection to the first network device from outside the LAN is limited (paragraphs [0032-0033]).

As per claim 10, Zak discloses the relay server according to claim 8, wherein a first network device of the plurality of network devices is connected to the relay sever via a gateway device having an address converting function (paragraph [0013]).

As per claim 11, Zak discloses the relay server according to claim 8, wherein the relay server is connected to the Internet (paragraphs [0032-0034]).

As per claim 12, Zak discloses the relay server according to claim 8, wherein the relay server includes a global IP address (paragraphs [0035-0037 and 0046]).

As per claim 13, Zak discloses the relay server according to claim 8, wherein the connection information includes a user ID and a password (paragraph [0027]).

As per claim 14, Zak discloses the relay server according to claim 1, wherein the relay server is connected to the Internet. (paragraphs [0032-0034]).

As per claim 15, Zak discloses the relay server according to claim 1, wherein the relay server includes a global IP address (paragraph [0045]).

As per claim 16, Zak discloses the relay server according to claim 1, wherein the connection information includes a user ID and a password (paragraphs [0035-0037 and 0046]).

As per claim 17, Zak discloses a method for communicating between a plurality of network devices and a relay server comprising:

- Establishing a communication path between each of a plurality of network devices and a relay server (paragraphs [0032-0033]);
- Demanding a connection from one of the plurality of network devices to at least one other network device of the plurality of network devices using the relay server (paragraph [0046]);
- Relaying a communication between the one network device and

the at least one other network device using the held communication path between the one network device and the relay server and the held communication path between the at least one other network device and the relay server (paragraphs [0032-0033]).

However, Zak does not explicitly disclose:

- TCP/IP connections that are established and held in response to login demands from the plurality of network devices.

However, in an analogous art, Gong teaches a relay server having connection between the remote server, which is the web server and client having web browser and applet software for Internet access (paragraphs [0010-0011, 0016]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement Gongs relay server in Zak's system in order to that the java applets receive the necessary downloads from remote servers.

Zak, in view of Gong, does not explicitly disclose:

- First and second devices initiates, logs into, and establishes TCP/IP connections with the relay server.

However, in an analogous art, Beyda teaches a first and second user registering with the relay server before attempting to send emails(column 5, lines 33-60).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement Beyda's first network device initiates, logs into and establishes the first held TCP/IP connection with the relay server, and the second network device initiates, logs into and establishes the second held

TCP/IP connection with the relay server in Zak's method in order to send and receive emails.

Zak, in view of Gong and Beyda, does not explicitly disclose:

- Wherein the connection information holding means periodically receives via the first or second held TCP/IP connection a connection holding command from the first or second network device, and a response is communicated to the first or second network device that sent the connection holding command to maintain the first or second held TCP/IP connection.

However, in an analogous art, Fuka teaches maintaining a correspondence between video client and video server even though a disconnect has occurred. This is done by a request from the video client. In response, the video server transmits video data (paragraphs [0080]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Fuka's connection holding means in Zak's server enabling a session to continue despite disconnectivity.

A per claim 18, Zak discloses the communication method according to claim 17 further comprising limiting the connection to the network devices from an outer network (paragraphs [0032-0033]).

As per claim 19, Zak discloses the communication method according to claim 17 further comprising connecting the network devices to the relay server via

a gateway device having an address converting function (paragraph [0013]).

As per claim 20, Zak discloses the communication method according to claim 17 further comprising connecting the relay server to the Internet (paragraphs [0032-0034]).

As per claims 21-24, Zak, in view of Gong and Beyda, does not explicitly discloses the relay server, communication system, and communication method according to claims 1, 2, 8, and 17 wherein the connection information holding means receives via the first or second held TCP/IP connection a connection holding command from the first or second network device, and a response is communicated to the first or second network device that sent the connection holding command.
However, in an analogous art, Fuka teaches maintaining a correspondence between video client and video server even though a disconnect has occurred. This is done by a request from the video client. In response, the video server transmits video data (paragraphs [0080]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Fuka's connection holding means in Zak's server enabling a session to continue despite disconnectivity.

As per claims 25-28, Zak discloses the relay, communication system, and communication method according to claims 1, 2, 8, and 17, wherein the first network

device or the second network device transmits a releasing notification such that the first held TCP/IP connection and the second held TCP/IP connection become vacant connections that are not used in the communication relayed between the first network device and the second network device (paragraphs [0032-0035]).

Response to Arguments

3. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara N. Burgess whose telephone number is (571) 272-3996. The examiner can normally be reached on M-F (8:00am-4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Ettinene can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Barbara N Burgess
Examiner
Art Unit 2157

December 26, 2007